ON THE SUPPOSED OCCURRENCE OF *FILARIA IMMITIS* IN MAN

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Over and over again the statement occurs in text books of medicine and parasitology that this worm has been found by Bowlby in man. Not infrequently doubt is thrown on the accuracy of the identification of the parasite by Bowlby. On referring recently to Bowlby's communication, I was surprised to find that the worms found by Bowlby were Bilharzia and that no mention whatever is made of *Filaria immitis*. Further I found that this fact had already been pointed out by Moniez* and an explanation given of how the error arose. As, however, this passage in Moniez appears to have been overlooked, I think it advisable to call attention once more to the facts.

The following is the report† of the communication made by Bowlby to the Pathological Society of London.

'Mr. Bowlby exhibited the urinary organs and parts of other viscera removed from two cases of Bilharzia. The first patient was an Arab, who was admitted into the hospital at Alexandria under the care of Dr. Mackie. The man was suffering from severe cystitis, with foul, blood-stained urine. On examination the bladder was found to be greatly thickened, and felt as though it contained a malignant tumour. In the urine the ova of the bilharzia worm were found. Perineal cystotomy was performed to relieve the patient's suffering, but he died a fortnight later. At the post-mortem examination numerous female bilharzia worms were found in the portal vein, thirty-seven of which, together with the urinary organs and portions of the lungs and spleen, had been sent by Dr. Mackie

* Traité de Parasitologie animale et végétale appliquée à la medicine, 1896. p. 356.

† Lancet, 20th April, 1889. p. 786.

to Mr. Bowlby. The bladder was contracted and thickened. The mucous coat was covered with a shreddy mass of finely fibrillated villous growth. The ureters were dilated, with thickened walls, and the mucous membrane was covered by a phosphatic deposit. The kidneys were in a state of suppuration. Under the microscope the thickening of the bladder wall was found to be due to an interstitial overgrowth of fibrous tissue, and the mucous membrane had been destroyed and was replaced by young fibrous tissue. There were numerous ova imbedded in the wall of the bladder. The walls of the ureters were filled with ova, some of which could be seen in the mucous membrane where it had not been destroyed. The kidneys showed the changes due to nephritis, and contained numerous ova. The lungs were semi-solid; several ova scattered through them. The second patient was a boy, seventeen years of age, from whose rectum Dr. Mackie removed a tumour (exhibited). The patient had suffered from rectal pain and the passage of blood. The tumour consisted of a diffuse papillomatous growth, which under the microscope was found to consist of a loose, richly cellular, fibrous tissue, in the interstices of which were numerous ova.

'Dr. Stephen Mackenzie said the opportunity of studying the general pathology of this disease was rare. He asked what was the origin of the coagula and fibrous threads often seen in the urine in these cases. Were any parent worms found in the bladder? They nearly always inhabited the blood-vessels. The ova in the alimentary canal were said to have lateral spines, while those in the urinary tract had terminal ones.—Dr. Moore had found both lateral and terminal spines on ova in both situations.—Mr. Bowlby, in reply, said that the process was composed of young fibrous tissue in a state of disintegration. The parasites were only found in the portal vein.'

Then, as already pointed out by Moniez, an abstract with the following title appeared in September, 1889, in the Centralblatt für Bakteriologie, Bd. VI, 1889, p. 190:—

'Bowlby Mittheilung über 2 Fälle von *Filaria immitis* beim Menschen (Lancet, Vol. I, No. 16, p. 786).

'(1) Bei der Sektion eines Arabers, welcher an Blutharnen gelitten hatte und dessen Blasenwand sich bei Lebzeiten schon verdickt anfühlte, fanden sich in der Vena portarum zahlreiche weibliche Würmer. In der stark verdickten Blasenwand waren

zahlreiche Eier eingebettet. Auch in den Harnleitern und Nieren fanden sie sich, sowie, in geringer Zahl, in den etwas derb anzufühlenden Lungen. (2) Bei einem 17 jahringen Knaben wurde ein Tumor im Rectum entfernt. Derselbe erwies sich als aus einem lockeren reichlich zellenhaltigen, fasrigen Gewebe bestehendm in dessen Zwischenräumen zahlreiche Eier lagen.' Kurth (Berlin).

This accidental or erroneous use of the name *Filaria immitis* for the worms, which as the original shows were Bilharzia, has probably been the source of all the following erroneous misquotations. At any rate it is clear that in these cases there is no question of *Filaria immitis* but of Bilharzia.

To make quite certain of this I wrote to Mr. Bowlby, and the following is an extract from his reply to my letter:—'I did not know before that I was supposed to be the discoverer of this Filaria. I am quite innocent of any knowledge of the said parasite, and the paper you refer to was on some cases of Bilharzia. If you can correct the error, please do.' This then disposes of Bowlby's supposed record.

Finally there is the record by Braun* of the supposed occurrence of *F. immitis* in man. Braun's words are the following:—'Ich fuhre hierbei dass im Jahre 1885, in Dorpat in der leiche eines Russen die zu Präparierübungen benutzt wurde sehr lange Nematoden in grosserer Zahl in den Venen gefunden worden sind; ich habe die wohl-erhaltenen Würmer selbst gesehen und korserviert; an ihren Filarien natur ist nicht zu zweifeln, jedoch bin ich nicht imstande mehre auszusagen, da ich die Parasiten nicht mehr untersuchen konnte.'

In this case, however, as the species was not identified, I do not think we are at present justified in including *F. immitis* among the parasites of man.

* Braun, Max. Die Tierischen Parasiten des Menschen, Vierte Auflage, p. 295.